

NOTES, ABSTRACTS, AND REVIEWS.

ROME MEETING OF THE INTERNATIONAL UNION OF
GEODESY AND GEOPHYSICS.

The agenda for the Rome meeting of the International Union of Geodesy and Geophysics have just been received, and a translation is published herewith:

International Union of Geodesy and Geophysics.

ASSEMBLY IN ROME CALLED FOR MAY 2, 1922.

SECTION OF METEOROLOGY.

Order of the Day.

1. Communication of the Chairman on the constitution of the Section.
2. Organization of the Committee of the Section.
3. General consideration of scientific and practical objects of the Section.

Ultimate relations with other Sections of the Union, with other meteorological associations, and with academies of science.

Communication of the Officers to the Union—letter from Switzerland.

4. Scientific questions proposed by the various national committees.

Proposals of the National Committee of France.

1. The different kinds of thunder storms, and more generally the atmospheric electric phenomena.
2. The clearness of the atmosphere and associated optical phenomena.
3. The different kinds of clouds.
4. The forecasting of weather, and particularly the method of [barometric] tendencies.

Proposals of the National Committee of Great Britain.

5. *The study of the upper atmosphere by sounding balloons.*—What the regions are in which there is need for new researches, and what the probabilities are for obtaining observations in the given regions.

6. *Relation between vertical convection and horizontal movement.*—Certain experiments seem to indicate that the mechanical effect of the penetration through the upper layers ought to determine the convergence of aerial currents, and thus provoke movements of one form or another, having the nature of eddies displacing themselves in a horizontal direction.

Evidence is desired, based on observation, of the nature and extent of the displacement of air by convection; also concerning the real trajectory of air in motion taking account of both horizontal and vertical motion.

7. *The control of movements of air in the stratosphere and the troposphere.*—The movement of air in the troposphere such as has been actually observed ought to be largely influenced by penetrating convection, but the same influence can not be very considerable in the stratosphere, which (and it is generally admitted) is not subjected to penetrating convection. The displacements produced in the stratosphere ought therefore, to be less complicated than in the troposphere, and the laws which control them ought to be simpler.

It is necessary to consider the displacements of air in the stratosphere, both from the point of view of theory and of observation. Mr. W. H. Dines has submitted the results of observations which seem to indicate that in England there exists a relation between variations of pressure and variations of temperature, very close and direct in the troposphere, but not so close and in an inverse sense in the stratosphere. The simultaneous values of temperature, pressure, and wind direction in the stratosphere are worthy of attention.

8. *Radiation and its influence on the temperature of the surface, the air and the sea.*—It is strongly desired that the time element be studied in relation to radiation phenomena in the atmosphere. The theories generally suppose the existence of final conditions, and the question of knowing how much time is necessary for final conditions to be attained is of prime importance.

9. *Relation between visibility at the surface and the quantity of dust in the surface layers.*—The committee advises the study of the pollution of the atmosphere and suggests two methods for determining effectively the proportion of impurities suspended as solids in the air. The first determines by filtration the proportion of solid matter existing in two liters of air; in the other the solid impurities contained in 50 cc. are projected on to a thin plate of glass in such a manner that they may be examined.

The question of visibility and of atmospheric impurities are of international interest. This study is ready for international collaboration.

10. *The composition of the atmosphere in the upper layers.*—There is too much difference between the results of different investigators on the composition of the atmosphere at altitudes above 20 kilometers.

According to different investigators the composition of the extreme layers of the atmosphere is (1) hydrogen, (2) geocoronium, or (3) helium.

If we succeed in agreeing upon the process of computation and on the results, the differences must necessarily depend upon the data to

which this computation is applied. It is important, therefore, to approve new steps for the solution of this problem and to know whether it is a question of the revision of calculation methods or of new experiments, in order to obtain satisfactory data for carrying on the calculation.

The atmosphere above 20 kilometers presents such problems as (i) the composition, density, and temperature of the air at different heights, (ii) the aurora and its spectrum, (iii) the electromagnetic phenomena and their relation to various magnetic variations and irregular magnetic perturbations, and (iv) the absorption of solar rays which do not penetrate as far as the lower strata.

Proposals of the National Committee of Italy.

11. *Meteorological data in relation to modern methods of statistics.*—The methods of presenting the normal values of the different climatological elements with regard to the demands of modern statistical methods.

—C. L. M.

RAINFALL AT PAGO PAGO HARBOR, TUTUILA, SAMOA.

Through the courtesy of Capt. W. Evans, United States Navy, Governor of American Samoa, and Lieut. F. C. Nyland, United States Navy, superintendent of public

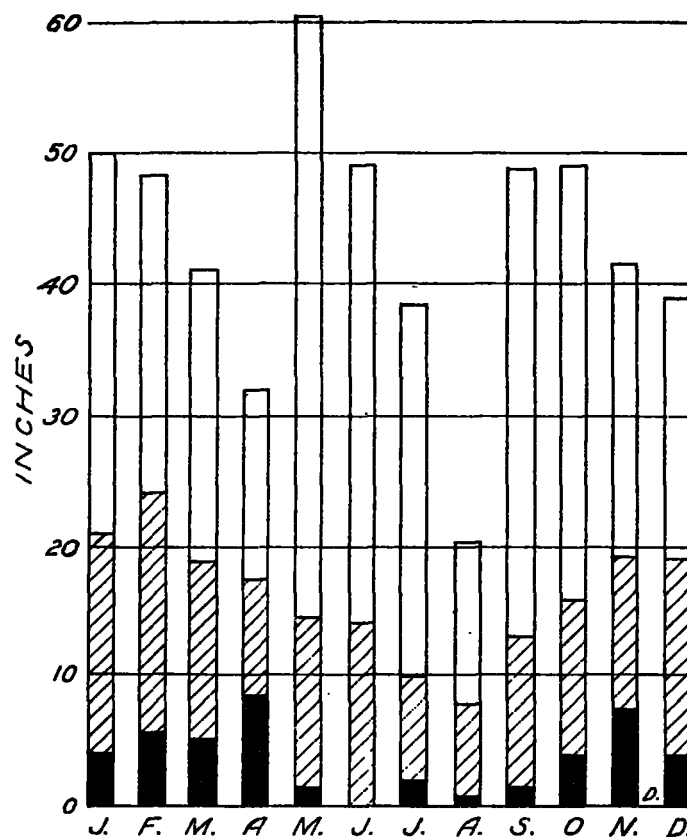


FIG. 1.—Rainfall at Pago Pago, Samoa. Highest, lowest, and average monthly amounts for years 1900-1920, inclusive.

works, Island Government, the Weather Bureau is able to present a table showing the monthly rainfall at Tutuila, Samoa, for the years 1900-1920, inclusive. The measurements were made at the United States Naval Station at Pago Pago Harbor.

A chart (Fig. 1) showing the highest, lowest, and average monthly amounts, adapted from a chart prepared by Lieut. Nyland, is also shown.

Tutuila is the southernmost island of the Samoan, or Navigator, group and is located in latitude 14° 18' S., longitude 170° 42' W. Pago Pago Harbor is on the south side of the island, some 85 miles east-southeast of Apia. Meteorological observations have been made at Apia for